

SUMMER 1953

25¢

VOL. 6 NO. 2

Leica photography





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photography

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Editor

STANLEY C. SAMUEL

Contributing Editors

John F. Brooks

Julius Huisgen

Production

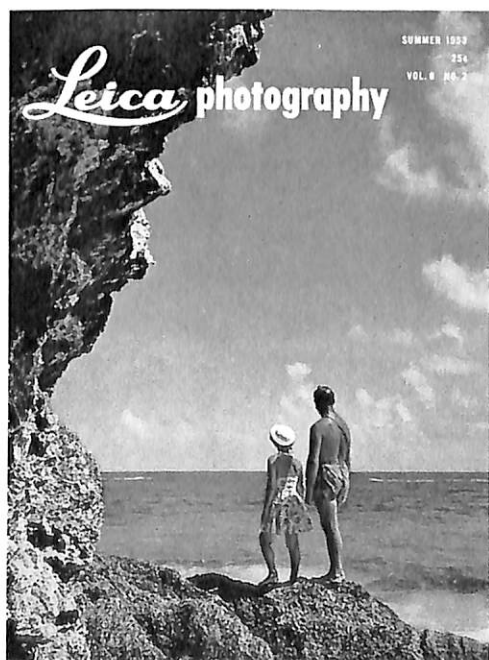
Florence Zubowicz

Circulation

Ann Errico

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MODERN

versus PICTORIAL

by Howard Dearstyne
Williamsburg, Virginia

(Editor's Note: Mr. Dearstyne's article was prompted by the one written by Walter G. Pollak "Modern vs. Pictorial," Summer, 1952. A section of Mr. Pollak's photograph "Contented Mother," appears at left.)

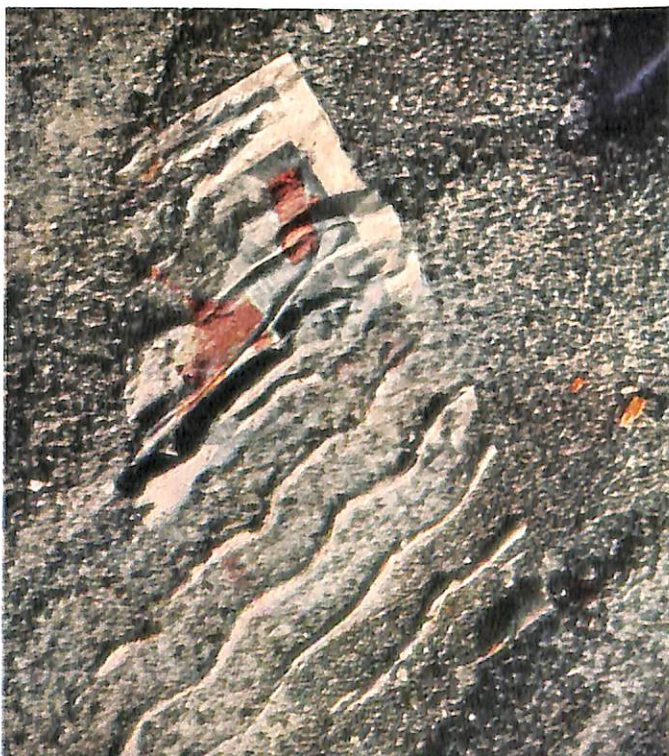
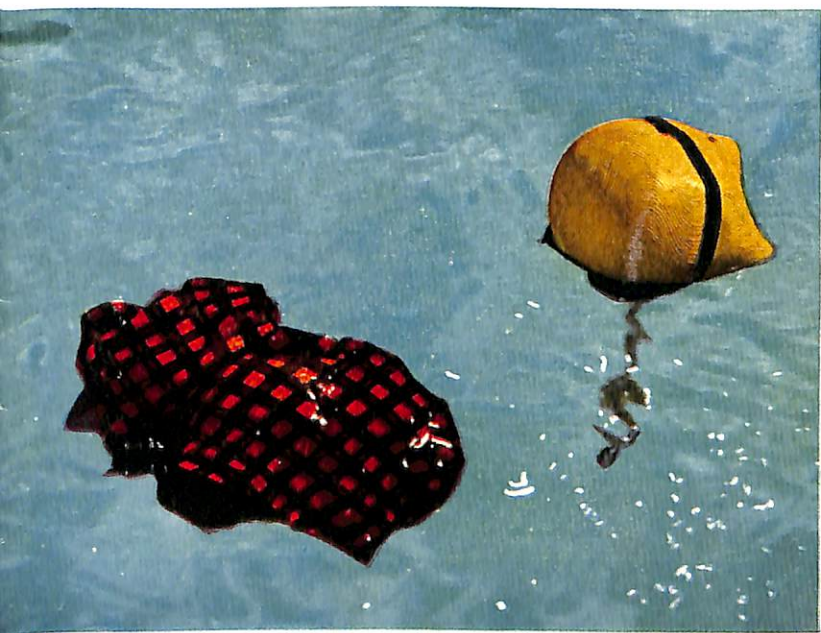


MODERN vs. Pictorial! If ever a tempest raged in a teapot, the photographic world is the teapot and this controversy the tempest. The word "pictorial" carries with it no connotation of time—a picture may be old or new—so that the term, if used to denote some particular kind of picture, requires a descriptive adjective. The word "modern," I take it, means "of the present day." Both words, in themselves, are totally non-partisan and contain within them no seeds of controversy. But careless users of words distort their meanings to make them serve their ends. "Modern," in some quarters, is an epithet signifying approval, and in others rejection, while "pictorial," apparently, is used to denote a particular type of photograph which is *good* as against other types which are bad. If there must be a fight over something, we should seek, in the title we apply to it, to indicate where the point at issue lies. It is evident that the expression, "Modern vs. Pictorial," is completely meaningless as a tag for the dispute. As if a tree, for example, were pictorial but not modern and not pictorial!

The origin of the argument, I assume, lies elsewhere than in the subject matter of the photograph. Or, do a few incurably romantic souls survive to insist that cer-



High, Dry and Iced—by Howard Dearstyne



Top—Molten Street Scene—by Howard Dearstyne.

Above Left—Looking For My Body—by Herbert J. Flatow.

Above Right—The Lantern—by M. Ress.

Right—Corrugated Comic—by Howard Dearstyne.

tain types of subject matter are the proper stuff for pictures and others unfit for them? As if Mother Nature cared more for her roses than for her skunk cabbages! A rose is a rose is a rose, it is said, but skunk cabbages will make equally good photographs. As if the components of beauty in the picture must themselves be what we speak of as beautiful! If competent artists ever held this viewpoint, which is doubtful, they have long since discarded it. Die-hards die hard, but those who once believed that only the good and the pure are the fit ingredients of the beautiful have, for the most part I fancy, passed to their reward.

If I may be permitted to select my subject matter where I find it, whether in forest, field, or stream; boulevard or alley; hovel or palace, garden or gutter—if no one is to tell me what I am to shoot, then this dispute, Modern vs. Pictorial, must derive from the manner in which the shooting is done and the resultant effect upon the photograph. The fight, it appears, is not over *what* I point my Leica at but *how* I point it. It seems that there is a pictorial way of pointing it and a modern way, and that these are sufficiently different to cause bad blood between the exponents of the two ways. So it behooves us, if possible, to find out what this difference is.

Can it be a matter of how near one gets to the subject—whether the shot is a close-up or a distant view, or something in between? Will someone presume to tell me that it is desirable for me to stand forty feet from my subject, that fifteen is not objectionable and six barely possible but that a distance of three feet or under is improper?

Is there, perhaps, some authority who insists that I must keep my Leica level when I snap the picture and may not hold it at an angle despite the fact that this beautiful little instrument is so readily pointed in any direction, up, down, or sidewise? Let him, in turn, step forward and present with strong reasoning his case for horizontal photography. This may involve demonstrating that it is unpictorial of us to look skyward toward the stars at night or view the earth from our 5' 9" above it or cast any sidelong glances whatsoever.

Possibly there is some photographic know-it-all who will be rash enough to tell me, though my subject matter is legitimate, my close-up allowed and my angle O.K., that my lighting is too modern—not correctly pictorial, that is. He may tell me that I may not take pictures in the early morning light or the mellow evening sun or in the rain because this distorts color or otherwise alters the true natural effect of the picture. To such a one I would say that nature is infinitely various in its moods and that any one of these moods, with the light which induces it, is as natural and realistic as any other.

I rack my brain to find a legitimate subject for controversy and it's very hard to find (we must try to avoid, if possible, mere conflicts of prejudice). Perhaps the root of the discord lies within the field of composition. It may be that there is someone hardy enough to tell me that his way of balancing a composition is superior to mine. He may insist that, like Raphael, I must compose my particular madonnas as firmly based pyramids; I dare not, as the marvellous Chinese and Japanese

painters so often did, turn the pyramid upside down—that is, locate the center of gravity toward the top of the picture rather than the bottom. Will my mentor also, perhaps, inform me that I should not place my subject at one side of a horizontal picture leaving the other side blank, or nearly so, or that it is impossible to compose by distributing many small objects more or less equally throughout the picture as did the great Flemish artist, Pieter Breughel? It would incense me, indeed, to be told that there are certain ways of balancing a composition which are more acceptable than others, and I would suspect anyone who insisted upon this of being rather limited in his experience and understanding of the arts. If it is precedent that this individual seeks, I can find for him honorable ancient, medieval or modern counterparts of any of my "unconventional" compositions.

Still searching diligently for that apple of discord which surely, since the dispute is somewhat bitter, must lie hidden in one aspect or another of the art of photography, let me inquire if it is the manner in which the objects or forms constituting the subject matter are combined or the unlike nature of the things brought in relationship to each other which is considered too grossly modern to be decently pictorial? If, for instance, like Dali, I were to drape a watch over a dead tree limb, would I be subject to censure? Must I avoid in my combinations of things effects which could be characterized as strange, quaint, out of place, absurd or disturbing. Must I also have no truck with soulless abstractions—those easy and empty pattern shots, fit only to serve as inspiration for the fabric designer? Well, if someone were to suggest to me, in effect, that in searching the world about for subject matter for my pictures, I use half an eye, instead of the two which I have, and at the same time put my brain to sleep, I would be inclined to answer him in some such wise: "But my dear colleague of the sensitized emulsion, I have in truth seen drooping Bulovas hanging from trees—if not literally this, then figuratively so, for the photographer, like the painter, to see fully and richly, must see with the eye of the poet. Indeed, I have seen in the world about me things naturalistic, things impressionistic, things expressionistic, dadaistic, surrealistic and abstract—yes, even abstract! Should I not photograph these things because you do not see them or, if you do, do not like them?" If I were sightless and lived in the kingdom of the blind I might be content, even eager, to be lead by this one-eyed guide, but what if I have two clear eyes and an open mind? I would surely let these eyes see what they see and would, without hesitation or misgiving, record these richly varied visual experiences with my camera.

The secret is—it's no secret really, for it stands to reason—that there are only two categories of photographs—good ones and bad ones, with all shades and gradations of quality in between. Our problem is to determine when a photograph is good and when it is bad or only indifferently good or bad—here there *can* be an argument and, provided the tongues of the two disputants are equally glib, the man with the keenest eyesight and deepest insight will win it. As for this popular controversy—Modern vs. Pictorial—it springs from the head rather than the heart: it is the stillborn child of limited understanding. ♦



SOME of you may not realize that the friendly little Leica, which is capable of making such shrewd and sober observations, has a delightful sense of humor, participating in its companion (the Leica word for owner) jokes with a sly blink of its quiet shutter, and utterly disarming the timid subject at that precise moment for fascinating pictures.

HE DISARMING LITTLE PORTRAIT-MAKER

by Fred Kosslow, Picture Editor
The Buffalo Evening News, Buffalo, N. Y.



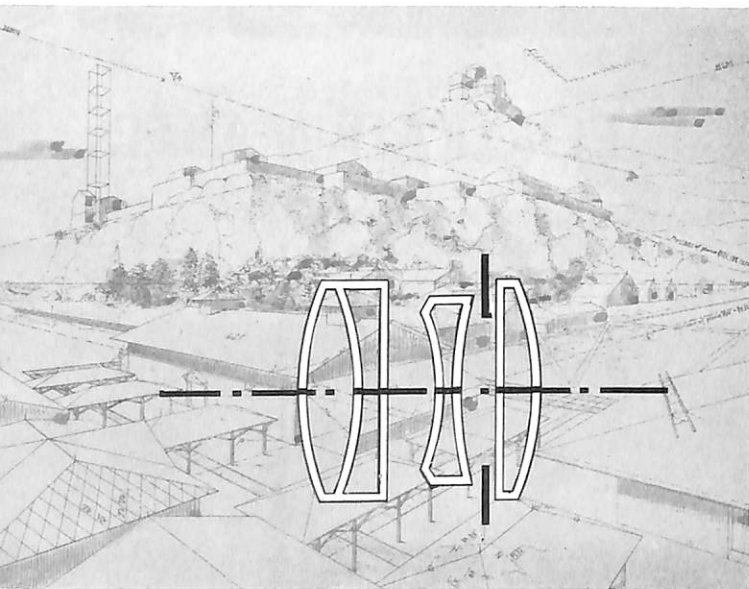
Most Leica photographers realize that it is a camera which combines business with pleasure, but the point of these brief words is that there is fun not only for the man behind the camera, but the person in front of it. And nowhere is fun more desirable than in making portraits indoors or outdoors. A wise photographer has said that a glass of wine was the most useful accessory he used in making portraits, but the patient (36 exposure) Leica goes a step further.



Most models reach a point where a bit of clowning does more to unlock the door to good expression than anything else. Why not let the model clown? And what could be better than recording these moments of humor as souvenirs of the pleasant occasion? Certainly the low cost of film makes it unnecessary to consider economy. The two unposed photographs, on this page, are the results of such pleasant relaxation for the model.

The lighting was with photofloods, and the lens the incomparable 90mm. Elmar. The job was made infinitely easier by using a tripod, which freed the photographer from the task of framing, except for an occasional recheck. Exposures were $f/4.5$ to $f/8$; speed $1/100$; Plus-X in Microdol; prints on Varigam. ♦

THE PRACTICAL USE OF LENSES AND PERSPECTIVE



PART (I)

by Joseph Foldes, New York, New York

YOUR practical knowledge of lenses and perspective may make the difference between your becoming an average or an outstanding photographer. You don't need to know the theoretical rules and explanations concerning these two subjects in order to fully utilize them in your photographic work. You do need to know a few practical facts about lenses and perspective.

First of all: what will lenses of different focal lengths do for you?

The main difference is in *image size*. If you photograph a stationary subject from a certain camera position with lenses of different focal lengths, the only difference between the pictures will be in image size. In the picture taken with the shortest focal length lens the subject will be the smallest. It will become larger as you use longer focal length lenses.

You may now ask: "If, besides the size, there is no important difference between pictures taken with lenses of different focal lengths, then why should I have more than one lens? I can change the subject's size on the image by changing the distance between it and the camera and also during enlarging." This is true, yet there are several *important* advantages in having lenses of different focal lengths for your Leica. The shorter the focal length of the lens the smaller the subject will be on the negative. The smaller the subject on the negative, the more of it will fit into your picture. It often happens that you want to photograph a subject but it just does not fit into your negative. You should go

Figures 1-5 taken from the same camera position with different lenses. The actual difference between them is the image size on the pictures. The pictorial effect and practical purpose of the pictures are also changed by the use of different lenses.



Figure 1—taken with the 35mm lens. This shot includes a broad view, showing a great expanse of the well-known structures of midtown Manhattan. The Times Building (right of center) is just one of the buildings shown.



Figure 2—taken with a 50mm lens. Here the picture includes fewer buildings, but they become more important individually. The Times Building on this photograph appears as one of the three most obvious buildings in the photograph.

farther away from the subject with the camera to get more in the picture but sometimes you can't do that; there is no room to back up. If at such times you change to a lens of shorter focal length (35mm. or 28mm. wide angle) the subject will become smaller on the negative and you can photograph more of it.



Figure 3—taken with the 90mm lens. Note that the Times Building now becomes the subject of the picture. The others in the background become props to show the location of the building and give big city mood to the photograph.



Figure 4—taken with the 135mm lens. The much greater focal length of this lens has again increased the subject's size on the image. Only part of the Times Building is shown, the other buildings in the background become unidentifiable.

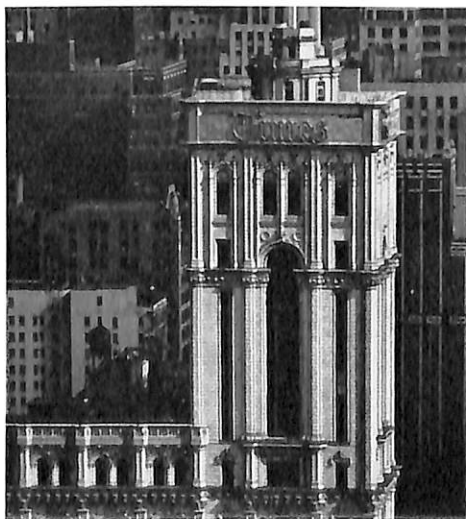


Figure 5—taken with the 200mm lens. The Times Building is brought still closer, its tower alone occupies almost the whole picture area. On this photograph the structural details of the building seem to be the main feature.

There are other times when you want to photograph a subject, but when you look into the viewfinder it is too small. The thing to do would be approach the subject with the camera until its size on the negative is as desired. At times this cannot be done; so a longer focal length lens (85mm., 90mm., 135mm., 200mm. or 400mm.) is used to make the subject larger on the negative.

Beside getting wide angle and telephoto effects, there is another *very important* use for lenses of different focal lengths: it has been established that the *point of view* from which a picture is taken is *critically important*. You may take a mediocre picture from one position, but a much better one from a different camera position. Quite often best camera position and the proper distance between camera and subject will not coincide. When you set up the camera at the point from which the best picture can be taken you may find that the size of the subject on the negative is not what you want; it is either too large or too small. To adjust the size of the subject on the negative you should approach it or back away from it. This, however, would move your camera from the place where the best picture can be taken. But if you have the full series of Leica lenses you can select the best point of view for every picture you take and then adjust image size by selecting the lens with the proper focal length. This is a practical advantage too great to be fully realized by reading about it—you will have to apply this method in your own work to appreciate the possibilities it offers.

There are still more advantages connected with having a complete set of Leica lenses of different focal lengths at your disposal:

If the camera-to-subject distance is small and you take your picture at close range, *distortion* often results. A distorted image spoils the picture (except when it is deliberately achieved on rare occasions). Distortion can be avoided if you back away from the subject with the camera. There is no definite rule on how far the camera should be from the subject for any one picture to get an undistorted image, but as a rough guide we may say that the distance between subject and camera should not be less than five times the greatest dimension of the subject being photographed. For instance: a human head which is two feet high (including a small part of the body) should be photographed with the camera at least ten feet away from it in order to avoid distortion. To get the subject sufficiently large in the negative from that distance requires a lens of longer focal length.

If you go out with a complete set of lenses your chance for a large share of good pictures is multiplied. This is hard to realize until you discover it in practice. When you hunt pictures with only one lens you stop at one place, look around, take a few pictures then move on to another location, etc. However, if you have a complete set of lenses you can stop at one place and shoot away to your heart's content. With your complete set of lenses of different focal lengths you will find a wealth of picture materials at any one spot. Every lens change will bring a different composition into view.

Another angle: having lenses of different focal lengths will enable you to control the relative sizes of subjects on the image which in real life are located at

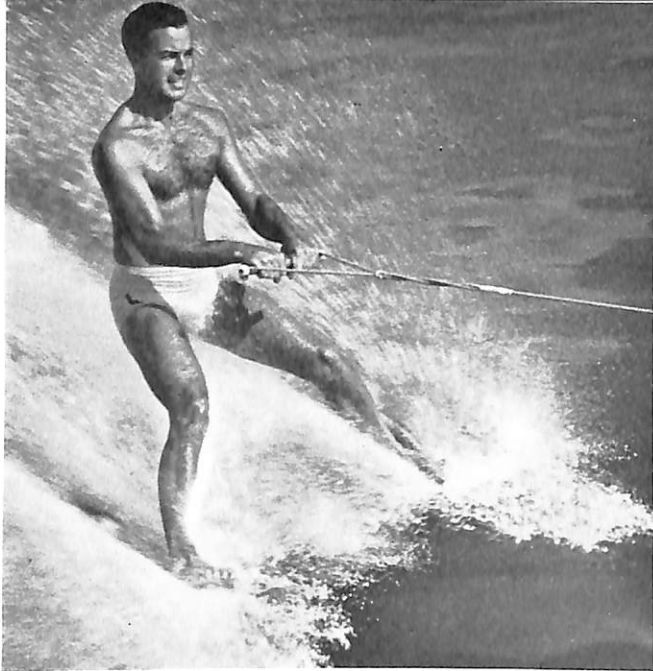


Figure 6: A typical shot showing the need for, and use of, a wide angle lens. Taken in Florida's Cypress Gardens, where special "photo-boat" places the photographer right beside the performing water skier. The subject is Jim Hubbard, the famous barefoot water skier. To include him and enough of the surroundings in the picture we had to use the 35mm. wide angle lens.



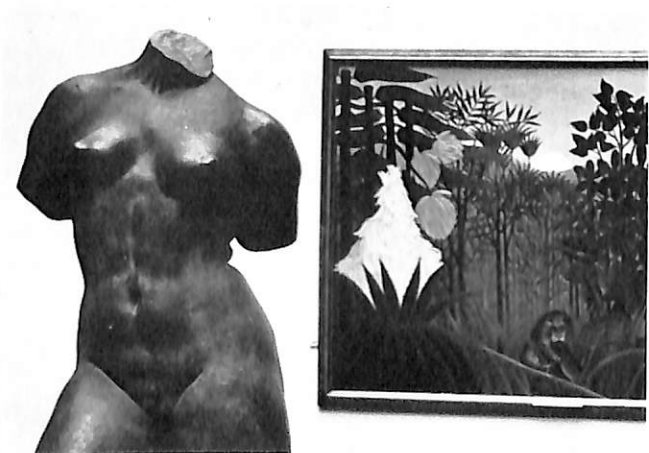
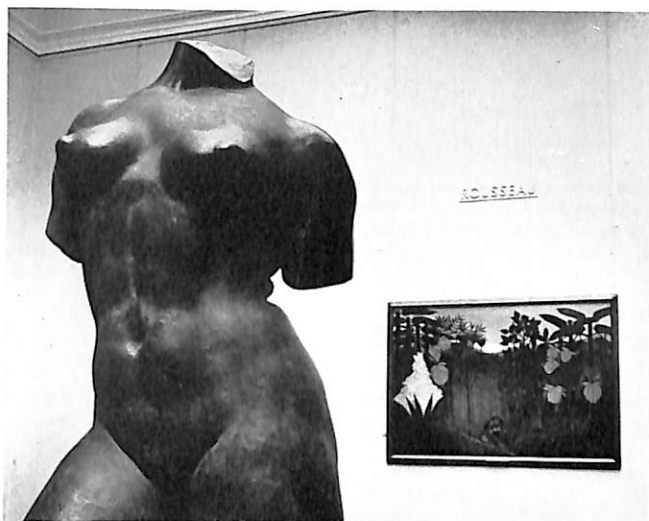
Figures 7 and 8: In Figure 7 the hand is badly distorted, way out of proportion. While this is an exaggerated example, we often get distortion (even if not to such a degree) by getting too close to the subject with the camera, without realizing that distortion will result. The distortion is sometimes obvious, other times the picture just looks unpleasant, out of proportion. This distortion is avoided in Figure 8 by backing away from the subject with the camera and by using a longer focal length lens to keep the subject the same size on the negative. Distortion can be controlled. Occasionally you can take a picture from a "close to subject" camera position to emphasize certain features of the subject by purposeful distortion but the result should be pleasant, not disturbing.

different distances from the camera. For example: There are two objects to be photographed, one ten feet tall and another twenty feet tall which is located a short distance past the first one. If you photograph these with a lens of short focal length, placing the camera close to the first object, the second object on the picture will appear to be smaller than the first one, although in real life it is twice as tall. If, on the other hand, you back up with the camera, get some distance away from the first



Figures 9 and 10: The feature of Figure 9 is the girl plus arch combination. To add drama and present an interesting black-and-white pattern it was necessary to move back and forth with the camera until we found a position where the girl was properly framed by the arch. But from that camera position much more area was included in the composition than we needed. The series of arches behind the subject becomes disconcertingly prominent because of the scale of the elements. This background-subject conflict is eliminated in Figure 10 by changing to the 135mm lens. The subject is brought closer without changing her position, or that of the camera, and gives us the picture we want. A dynamic excitement has been achieved by simplifying the composition to its essential elements. Many photographs can be brought out of a mediocre setting by the selection of the proper lens for the job.

object, and take another picture with a longer focal length lens (to keep the first object same size on the image), then the second object will appear to be larger than the first one. By changing the subject-to-camera distance and the focal length of the lens used, you will be able to achieve several variations in relative sizes between two objects located at different distances from the camera. (*To be continued in the Fall, 1953 issue*).



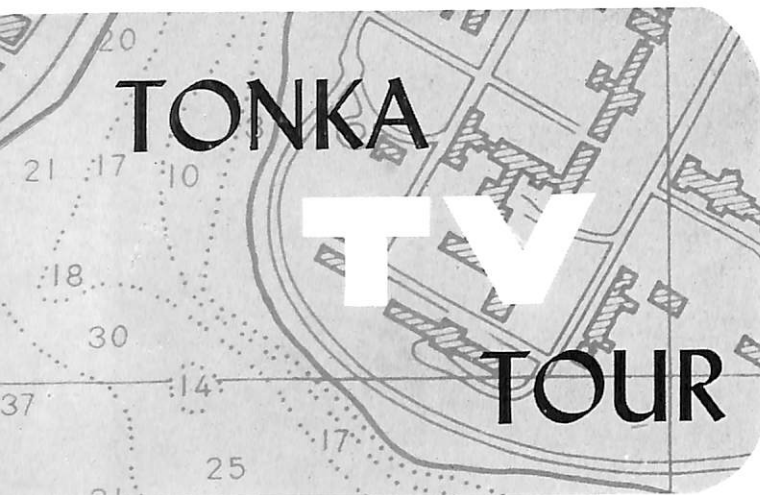
Figures 11 and 12: If you photograph two or more subjects located at different distances from the camera, you can, within limits, control their relative sizes on the negative by varying the camera-to subject distance. Of course, this will also change their actual size on the picture. You can control the relative sizes of such subjects, without altering their actual sizes much on the photograph, if you select the proper camera position for the desired relative sizes, then adjust their actual sizes on the negative by using a lens of the proper focal length. Figure 11 was taken with the camera close to the statue using the 35mm lens. To take Figure 12 we backed up with the camera and used the 200mm lens to get the statue on the negative approximately the same as it is in Figure 11. Between these two extremes we could adjust the relative sizes by placing the camera at an intermediate spot and using the proper lens.



Figure 13: Having several lenses of different focal lengths enabled us to take this delightful picture. We used the 90mm lens. Because of the decreased depth of field of this lens the background is out of focus which results in an interesting effect. The resulting defused airyness lends a pleasant "out-of-doors" look to the photograph.



Figures 14 and 15: It often happens that you have an interesting subject in front of you but you cannot make a good composition simply because the subject is too far away and is not large enough on the negative. Using lenses of longer focal lengths will bring the subject close enabling you to make any composition you want. Figure 14, for example, was taken in the zoo. We stood behind the fence and got this closeup of the pelican using the 135mm lens. We wanted to photograph the cat in Figure 15, in this lying down position but we were afraid he would get up if we approached him. The 200mm lens enabled us to get this picture without getting too close. The lenses of long focal length used for these two photographs allow a clarity of detail impossible with a lens of shorter focal length.



by Robert K. Williams, Excelsior, Minnesota
Photographs by Les Fulton

LEICA photographs are now on television in the metropolitan area of Minneapolis as a new method of advertising real estate. Through the combined efforts of Les Fulton, professional Leica user, two suburban real estate firms and a TV advertising agency, Upper Midwest TV owners can take a real estate "tour", from their easy chairs, by viewing some 85 Leica photographs on their home screens.

The name of this new innovation in television advertising—and a new use for the Leica camera—is called the Tonka TV Tour—a half-hour show over station WCCO-TV in Minneapolis.

The first in this series took TV viewers on an extended tour of the fashionable Lake Minnetonka area, 15 miles from Minneapolis, via Mr. Fulton's Leica photographs. The show is sponsored by two leading Minnetonka real estate firms, the Douglas Reese Real Estate Company and Fox, Incorporated; also by the Video Advertising Association of Minneapolis.

Les Fulton, who owns his own camera shop and



The major portion of this Tonka TV Tour of Leica photographs were shots of private homes in the Lake Minnetonka area. Some were new, some old, all taken by Mr. Fulton's Leica at a speed of 1/100th, f/9, Plus-X film.

operates a commercial photography firm at Wayzata, Minnesota, got his orders for the TV show just seven days before the program was scheduled. A quick consultation with real estate men, Dick Thompson, of the Reese firm, and Jack Fox—and Les was on his way.

He started his tour of Lake Minnetonka at 8 a.m. one Sunday morning. Eight and one half hours later, Les had over 180 shots of every Minnetonka advantage that a prospective home-owner would look for.

The Leica cameraman shot everything—homes for sale, modern schools, transportation facilities, churches, shopping centers, eating places, and every conceivable living facility needed to induce buyers into the Lake Minnetonka district.

Les proceeded to do his own film processing, and two days later he and his associates selected 85 8x10 inch Leica photographs for the TV show. He used Correx tanks to develop his films, two rolls at a time, back to back. "I couldn't have turned out the photographs that well, or as fast, using any other method," Les says.

The 8x10 prints were made with a Leitz Focomat Ic



There wasn't enough time to pick good days from bad ones to take the real estate photographs. So Les ended his day's shooting in the rain. This photograph was taken at a speed of 1/100th, f/4.5, Plus-X film.



The TV Tour gave television viewers a look at all phases of life on Lake Minnetonka, including churches. Here is a view of the Wayzata Community church with its large, towering pillars.



Schools play an important part of real estate selling and buying. The new Wayzata, Minnesota, high school on Lake Minnetonka was included in the photographic tour on television.



To show the convenience of shopping centers, photographs of business districts of many lake-side communities were taken. Above is a typical scene of the Excelsior, Minnesota, downtown section.

enlarger and mounted on 10x12 white cards, numbered, labeled, and were then ready for the Tonka TV Tour.

Just a week after he had made the "live" tour, Fulton's Leica tour was repeated via two TV cameras which picked up the mounted pictures from two easels. Both real estate men did the narrating and the finished product took TV viewers around Lake Minnetonka.

Since then, other real estate firms in the Minnetonka area have become Leica users also, and are taking their own photographs for display purposes. Mr. Fulton does the processing and gives them 5x7 black-and-white enlargements to go with descriptive material of the real estate for the display board.

Just this month, Fulton's Leica snapped a series of 140 industrial photographs in just one morning's work in an industrial plant. "I used almost every Leitz lens made to shoot that industrial series," says Les. "And it included everything from macro-photos to 30-ton punch presses."

Mr. Fulton's Leica photography has branched out into over a dozen fields during the past twelve months.

Using the Leica camera, and a varied assortment of Leica accessories, his assignments have included portraits, children's candids, wedding candids, real estate, industry, products, formal portraits, newspaper photography, magazine illustrations, architectural subjects, accidents, and reproductions of documents, certificates and pictures.

Successful photography with a Leica is not new to Mr. Fulton, however. After receiving his discharge from the Army in Frankfurt, Germany, in 1945, Les stayed on in Europe to study photography under the famous Willy Hinkel. Starting with absolutely no knowledge of photography, he worked and studied, night and day, until he began free-lancing for such firms as the German Branch of the American Express Agency, Scandinavian Airlines, and some U. S. airlines.

Six years after becoming a civilian, Les returned to the United States with over 40,000 35-millimeter negatives in his files. Now he's added another 180 photographs—this time of Minnetonka—and it looks like there'll be many more such tours in the future, too. ♦



Besides homes, schools, and churches, Mr. Fulton included photographs of Minnetonka industry too—such as this one of the J. R. Clark Manufacturing Company.



Just 20 miles from Minneapolis, the tour didn't miss the transportation angle for prospective homeowners. Here's an example—bus transportation to the heart of the Twin Cities from all over the Minnetonka area.



THE NEW *Leica* SUMMICRON 50MM f/2 LENS

Gravure Section photos were taken by Julius Huisgen and John Jonny with the new Summicron lens.

HERE is a truly new advance in camera optics and design . . . another Leica first. The Summicron 50mm f/2 is the only high speed lens that will give your pictures corner-to-corner sharpness. The Summicron is a seven glass element lens incorporating a radical new design principle and utilizing newly developed, high refractive optical glasses combined with air lenses of a special shape and effect. This makes possible a degree of correction found in no other lens.

Your black-and-white pictures will take on a new sparkle with overall sharpness from center to edge. You will get truer rendition in your color transparencies, particularly at the edges. The Summicron lens will establish new standards of excellence in both color and black-and-white photography.

It is interesting to note the development of Leica lenses of 50mm. focus and f/2 aperture.

The Summicron (right) is more compact than the Summar (left)



The first lens in the series of 50mm. lenses for the Leica camera, with the high aperture of f/2, was the Summar. This lens represented a Gauss-type design. The lens design was selected because it met the requirements for a high aperture at a comparatively large image angle in a satisfactory manner. The Gauss-type, in its basic design, also offers favorable conditions for the correction of aberrations, and this refers particularly to color correction. The Summar, which was created two decades ago, showed a remarkable image quality. Today it is still highly valued by its owners and is used very successfully. This is particularly true when the lens has been provided with a reflection-reducing coating, because the coating of the lens surfaces, as it is now being used on practically all lenses, has the effect of considerably improving the contrast in Gauss-type lenses.

In line with the requirements of modern color photography for a lens that was free from vignetting, the Summar was created. The front component of this lens is larger in size than the usual requirements for an f/2 aperture, so that the transverse section of the bundle of oblique rays is enlarged, permitting more light to reach the edges of the image. Because of this design the vignetting effect, which is always particularly troublesome in color photography, was reduced to a minimum.

At all times, within the field of optical design, improvements have been possible through advancements in glass-producing technique. For this reason it was only natural for Ernst Leitz of Wetzlar, Germany, to utilize the possibilities which presented themselves through the introduction of new, high refractive index glasses, (the so-called Lanthan-Krone glasses), for the design of new lens types. The utilization of these new glasses therefore represents the basis for the improvements which have been accomplished within the new Summicron lens.

The advantages offered by Gauss-type lenses in re-



LOEW STAIR

JANET LEIGH • JAMES STEWART "THE NAKED SPUR" TECHNICOLOR • ROBT. RYAN • RALPH MEEKE

JAMES STEWART JANET LEIGH ROBT. RYAN RALPH MEEKE

M-G-M: *The NAKED SPUR*

TECHNICOLOR



AS WILD
AS THE
UNFRAMED
WILDERNESS
WHICH
FILMED!

LAST MAN
ALIVE GETS
THE
HONOR!

MILLARD
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GREAT WESTERN
CLIMAX!

UNUSUAL FILM WILL ACQUIRE
A WIDE WELCOME!

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MOST VALUED OF HIS CARRIERS AWARDED
CONFIDENCE FOR THIS YEAR. THE
WESTERN HAS COME INTO ITS OWN!

CASTING AN ORIGINAL WITH FOR
OUTSTANDING CASTING. A CAPTIVATING
WESTERN MYSTERY — UNUSUAL!

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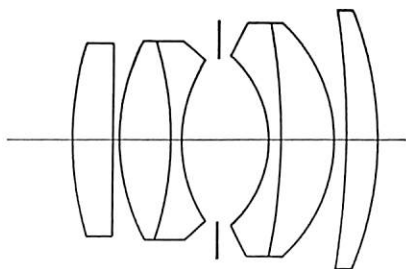
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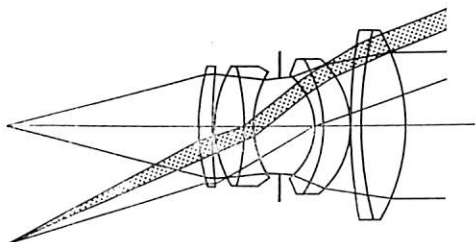
BOB HOPE
FILMS

ASTOR
FILMS

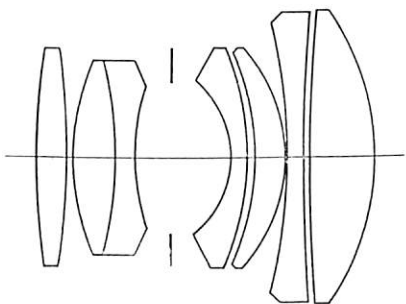
SUMMAR



SUMMITAR

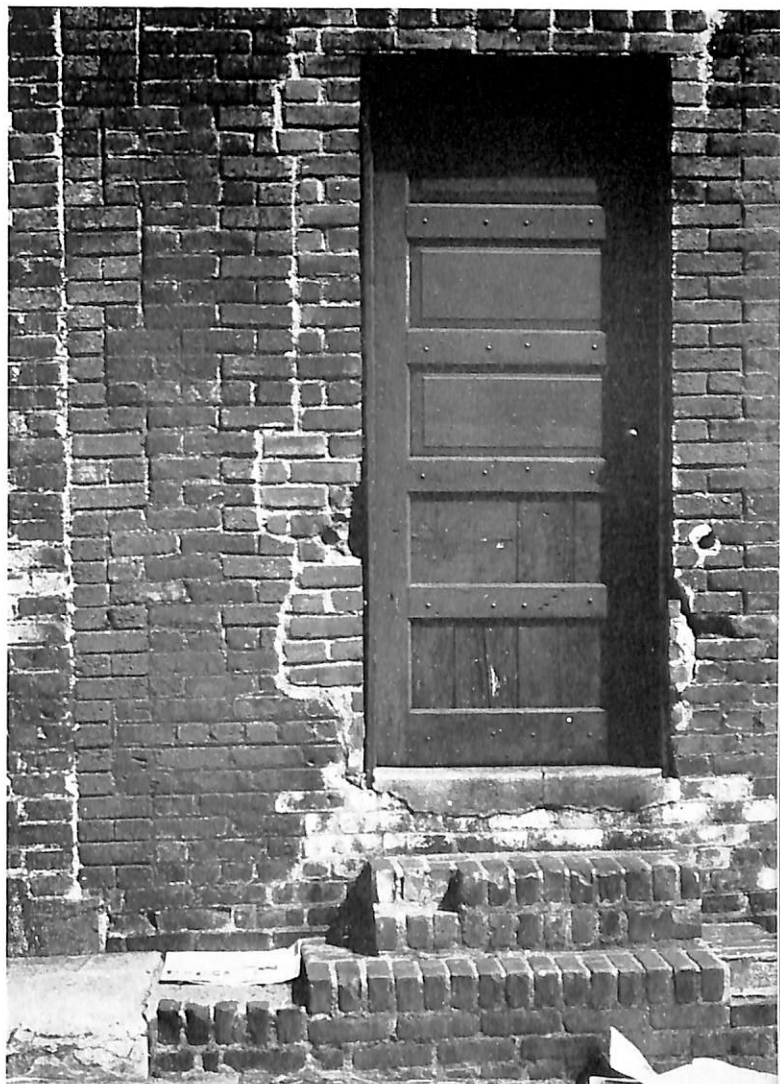


SUMMICRON



spect to chromatic corrections, particularly in respect to the elimination of color aberrations of the higher order, have been fully realized in the Summicron. The outstanding image quality is already evident at full aperture by an exceptionally uniform and brilliant recording of the image details over the entire image area. Optimum image quality, which normally cannot be obtained until a lens is stopped down considerably, is reached in the Summicron at the relatively large aperture opening of $f/4$. An extremely high degree of contrast and resolution is obtained.

The requirements for highest possible freedom from vignetting has also been fully accomplished. On the Summicron the exceptionally large diameter of the front lens is immediately noticeable. However, it must be pointed out that the increase of the front element, and the increase of the width of the oblique bundle of rays to eliminate vignetting, increases the difficulty of correcting other aberrations. The reduction of vignetting in the Summicron, coupled with its over-all high correction, can be regarded as an outstanding achievement of optical design. The Summicron is a lens of highest performance which combines the most recent advances in the production of optical design.



Corner to Corner Sharpness

See it NOW at your franchised Leica dealer's!

PRICES

10.016	Leica Model If with Summicron 50mm $f/2$ lens and viewfinder	\$258.00*
10.041	Leica Model III with Summicron 50mm $f/2$ lens	314.00*
10.061	Leica Model IIIa with Summicron 50mm $f/2$ lens	393.00*
11.016	Summicron 50mm $f/2$ lens, in collapsible focusing mount, with click stops	183.00*

* Retail Price Including Federal Excise Tax

A complete line of accessories for this lens will be available soon.

The basic design of the Summicron is protected by United States patent number 2,622,478. ♦

NOTES AND TIPS

NEW PRICES AND PRICE LIST . . . An up-to-date and greatly enlarged, illustrated retail price list is being mailed to all registered Leica owners with this issue. It has been enlarged in description so that you will be able to choose more easily the equipment best suited to your needs.

Due to production economies, we are now able to lower the prices on the If and IIf cameras by \$8.00, and the Elmar 90mm. lens has been lowered by \$14.00. These new prices are listed below:

<i>Number</i>	<i>Item</i>	<i>Retail Price (Incl. Tax)</i>
10,000	Leica Model If without lens or Viewfinder	\$ 64.80
10,005	Leica Model If including Viewfinder, but without lens	75.00
10,010	Leica Model If with Viewfinder and Elmar 50mm f/3.5 lens	143.00
10,015	Leica Model If with Viewfinder and Summar 50mm f/2 lens	233.00
10,016	Leica Model If with Viewfinder and Summicron 50mm f/2 lens	258.00
10,020	Leica Model If without Viewfinder but with Summaron 35mm f/3.5	166.80
10,030	Leica Model IIf without lens	131.00
10,035	Leica Model IIf with Elmar 50mm f/3.5 lens	199.00
10,040	Leica Model IIf with Summar 50mm f/2 lens	289.00
10,041	Leica Model IIf with Summicron 50mm f/2 lens	314.00
10,045	Leica Model IIf with Summaron 35mm f/3.5 lens	233.00
11,030	Elmar 90mm f/4 lens	98.00

FLASH UNIT DISCONTINUED . . . We regret to inform you that the new CAVOO, for non-synchronized Leica cameras, which we announced as available in the Spring 1953 issue before it became available in quantity, is discontinued. Test results at the factory in Wetzlar indicated that it was too limited in use and the results were not always consistent.

RECOMMENDED READING . . . Already widely acclaimed as an outstanding documentary, Henri Cartier-Bresson's *THE DECISIVE MOMENT* illustrates why the Leica has become an "extension of his eye." Working in black-and-white, famed photographer Cartier-Bresson has recorded the world today in unmatched fashion. A collector's item—Simon and Schuster, \$12.50.

NEW FLASH BULBS AND FACTORS . . . We have recently added GE 6-B, GE 31-B, and Sylvania FP 26-B flash bulbs to our Flash Factor Cards for black and red synchro-scale, when used with Kodachrome daylight film. Use the same scale settings as you do for clear bulbs. They are listed here for your convenience and will be supplied with all flash units in the future.

Black Synchro-Scale

GE 6-B	40	38	35	28	22	15
	17	11	8	6.5	4	3.5
GE 31-B	50	46	40	32	25	16
	20	15	10	7	5	4
Sylvania FP 26-B	40	38	35	28	20	13
	19	14	10	7	5	4.5

Red Synchro-Scale

GE 6-B	44	36	32	28	22	15
	17	13.5	7.5	5	2.5	1
GE 31-B	60	45	38	32	25	16
	18	12	7	4.5	2.5	1
Sylvania FP 26-B	44	36	32	28	20	13
	17	13.5	7.5	5	2.5	1

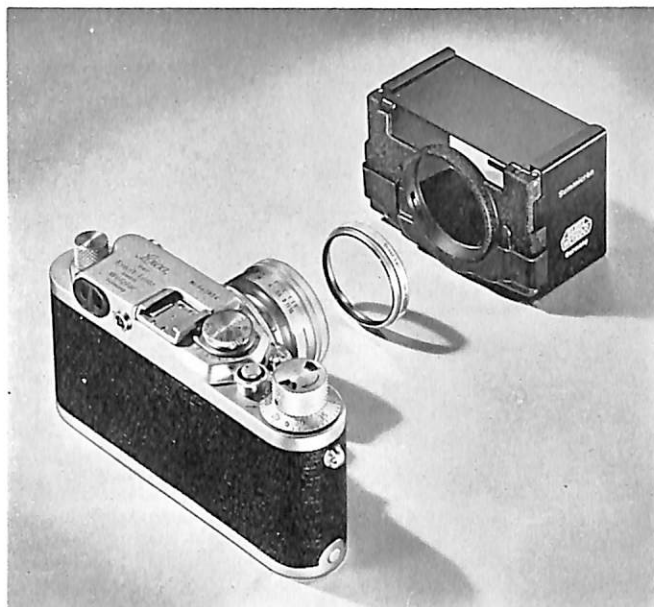
By the way, our Repair Department informs us that many times when cameras are received with complaints that they are not synchronizing properly, the camera is found to be in perfect condition. So, if you ever have any trouble, please make certain to send your flash gun, connecting cord, and BC insert so that we can check all the way down the line.

NEW LEICA CATALOG BINDER . . . We are pleased to announce that in the near future a new Leica binder will be available to hold all Leica pamphlets and technical booklets.



Our pamphlets and booklets will be slightly revised in size and all will be punched for insertion into the MULT-O ring, washable binder. Overall dimensions of the binder are 7x9" with a 1" capacity. Each binder will have a registry card to be returned to E. Leitz by the owner, who will then automatically receive each new brochure as published.

Code word LEBBM Catalog No. 20,005 Price \$1.35



NEW PRODUCTS FOR SUMMICRON LENS . . . A collapsible sunshade and a series of filters. (Summitar filters and sunshade, although of similar construction, do not fit the Summicron lens.)

CORRECTION . . . Recently we announced that the new speeds on the Leica camera were changed as a result of the International Standards Association recommendations. This was an error, since there is no I.S.A. in existence. These speeds were changed because more cameras throughout the world are so calibrated.

WATCH FOR STOLEN EQUIPMENT

The following lenses and cameras were stolen from Ernst Leitz, Midland, Ontario. Any information leading to their recovery should be forwarded to E. Leitz, Inc., New York.

<i>Cameras</i>	<i>Serial Numbers</i>
Leica Model IIIc	542814 601277 610501 to 610620 incl. 610340 610357
Leica Model IIIc	483212
Leica Model Ic	520088

Lenses — Summitar 50mm f/1.5 — Serial Numbers:

956139	1029155	1029173	1029192
999583	1029156	1029174	1029193
1029071	1029157	1029176	1029194
1029088	1029161	1029177	1029199
1029089	1029162	1029178	1029203
1029127	1029163	1029179	1029204
1029139	1029164	1029180	1029206
1029141	1029165	1029183	1029207
1029147	1029167	1029184	1029210
1029151	1029169	1029185	1029211
1029152	1029170	1029188	1029212
1029154	1029172	1029190	1029213

1029215	1029253	1029272	1029323
1029217	1029254	1029273	1029385
1029219	1029255	1029274	1029389
1029220	1029256	1029276	1029399
1029221	1029258	1029278	1029401
1029222	1029260	1029279	1029462
1029224	1029261	1029280	1029473
1029225	1029262	1029281	1029485
1029228	1029263	1029282	1029500
1029234	1029264	1029284	1052025
1029235	1029265	1029285	1052063
1029238	1029266	1029286	1052074
1029239	1029267	1029288	1052081
1029242	1029269	1029293	1052086
1029245	1029270	1029297	1052096
1029250	1029271	1029300	

Elmar 90mm — Serial Numbers

958003	958076	958101	958125
958007	958077	958103	958127
958010	958080	958105	958130
958011	958081	958106	958131
958019	958083	958108	958133
958025	958086	958110	958135
958027	958087	958112	958137
958034	958088	958113	958140
958037	958089	958114	958143
958049	958094	958117	958145
958056	958095	958118	958147
958057	958096	958119	958151
958059	958099	958122	958187
958074	958100		



PARTS DISPLAY . . . The accompanying photograph shows our Leica parts display and cut-away views of four lenses and binoculars. When we have used this display at exhibits, it has created such interest we thought camera clubs and schools might be interested in having a mounted reproduction of it. Just send a letter on camera club or school letterhead and we will be most happy to send one without charge.



HOW TO LICK FAILURES WITH FILTERS

By Kenneth M. Swezey
Brooklyn, N. Y.



Filters provide a background. Edge-lighted buildings and blossoms lose their form (left) when photographed without a filter against a blue sky. The resulting dark sky (right) when the same subject is shot through an orange-red filter provides a firm outline.



Filters help bring out clouds. Without a filter, a deep blue sky (top) often photographs so light that clouds are lost in it. Yellow, green, and red filters darken the sky (bottom) so that clouds stand out vividly.

Have you ever had the heartbreak of shooting breathtaking clouds against a deep blue sky, only to find clouds and sky scrambled as a patch of sickly gray in the final print? Have you photographed distant mountains to discover later that their recorded semblance had been completely obscured by haze? Have you tried to copy colored pictures in black-and-white, to find that colors which look so different in brightness in the original turn out to be exasperatingly alike in the copy?

Then you should get better acquainted with filters!

The easiest way to find out how filters can help you is to analyze a batch of disappointing prints. In everyday shots that are not too colorful—of friends, pets, landscapes under gray skies, general subjects about town—a filter would probably add little or nothing. In pictures of flowers, landscapes under blue skies, colorful still lifes, or in copies of colored paintings or prints, however, the right filter may transform a downright failure into a prize-winning success!

The secret of filters is simple. Each filter (depending on its own color) absorbs certain colors from the light which strikes it and lets the remainder pass through the camera lens to the film. As a result, the absorbed colors appear darker and the passed ones lighter in the final print than they would have normally.

It's easy to select a filter to produce a desired result if you remember this rule: *any filter tends to lighten objects of its own color and other colors close to it in the spectrum; it tends to darken complementary colors and other colors farther away in the spectrum.*

If you are an average Leica fan, and don't expect to indulge in specialties, you can probably satisfy all your ordinary needs with just three filters: a Leica Yellow-2, an Orange-Red, and a Panchromatic Green.

Leitz filters are especially stressed here, as poor filters can ruin the needle-sharp definition of good lenses. Leitz makes its own filters from solid, colored, optical glass, polishing both surfaces flat and parallel with the same precision as Leica lenses. Besides being superior optically, these filters will stand heat, moisture, and general abuse better than cemented gelatin filters.



Filters increase contrast. Without filter, bright orange gladioli (left) appear in the same tone of gray as their darker leaves. By rephotographing them through an orange-red filter (right), some of the green is held back. The blossoms take on their original brightness.

Here's a few things that these basic filters can do:

Yellow 2—Can set off white clouds against a blue sky by darkening the blue to the approximate tone that your eye sees. Lightens greens and helps generally to balance the response of panchromatic film to all the colors of daylight. Helps "see" distant mountains and buildings by penetrating haze. By absorbing blue light reflected from the shadows, this filter also helps improve the textural rendering of wood, textiles, stone, sand, and snow, in sun light or under a blue sky.

Orange-Red—This filter increases the punch and drama of pictures by overcorrection. It makes clouds stand out vividly by showing them against skies made darker than the original. It cuts deeper through haze. It gives you a dark sky against which you can outline edge-lighted buildings and blossoms which would be lost against a light sky.

Panchromatic Green—Just as Yellow-2 filter corrects the color rendition of pan film in daylight, this filter corrects its rendition in tungsten light—a source which contains more red than sunlight. In daylight, this filter will also darken a blue sky and penetrate haze. At the same time it will lighten green foliage. Because it restrains the flesh tones, it is better than an orange-red filter (which tends to wash them out) in taking portraits against the sky.

Besides their uses in everyday pictorial work, these three filters may occasionally save the day as contrast filters in making close-ups of flowers, or in copying.

You would like to photograph some brilliant orange gladioli, for instance. In real life the blossoms seem considerably brighter than their green stems and leaves. In a shot taken on pan film without a filter, however, leaves and blossoms turn out to have the same brightness. If you now photograph the flowers through your orange-red filter, light from the green will be held back, allowing the blossoms to show up as bright as they did in their live prototypes.

As another example, maybe you will have occasion to photograph the text from an ancient missal, printed partly in light red and partly in black. In an unfiltered

photograph, the red appears so faint that it is hardly legible. By retaking the picture with your green filter over the lens, the red printing may be brought up to its original value.

Again, you may have an old, irreplaceable portrait that is disfigured by an ugly yellow stain. By copying the photo through your orange-red filter the stain vanishes!

Because filters absorb part of the light that would otherwise affect the film, you must usually increase the exposure when using one. The number of times you must increase the exposure is called the *filter factor*. This factor is generally different when shooting under daylight and tungsten light. Here are some workable factors for the most-used Leica filters and average 35mm. pan film:



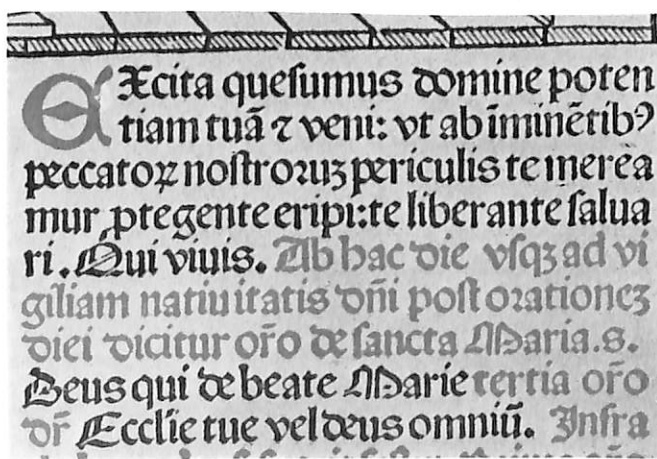
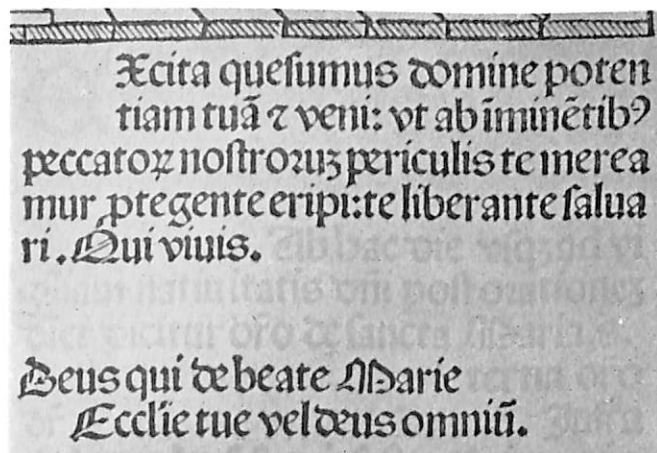
Filters penetrate haze. In long-shots from mountains or high buildings, the horizon is often obscured by haze produced by the scattering of blue and ultraviolet light (top). Yellow, green, and red filters absorb this scattered light, making the distance visible.

Filters make colors disappear. This old, irreplaceable portrait was completely disfigured by a deep yellow stain. In a copy made by photographing it through an orange-red filter, the stain completely vanished.



(Continued from page 23)

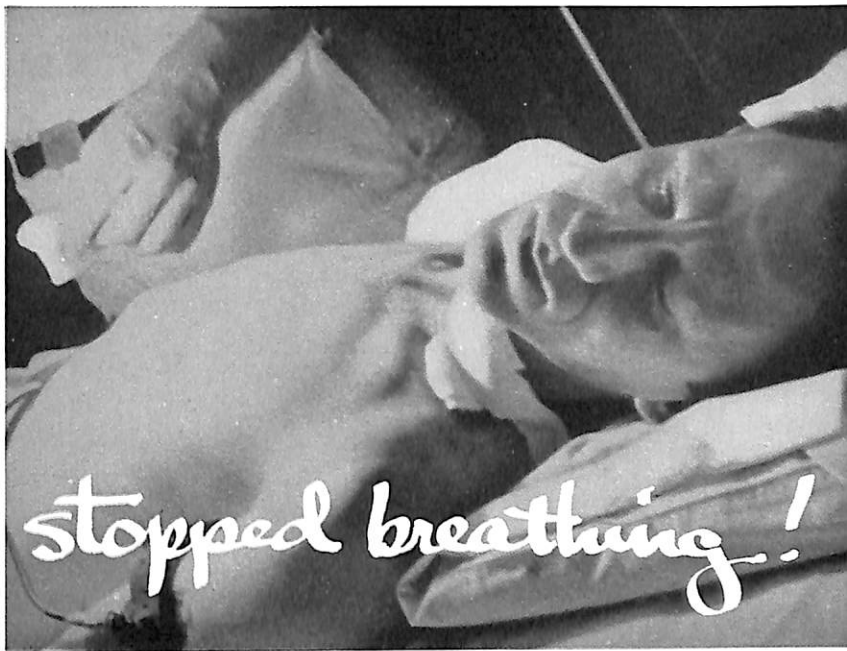
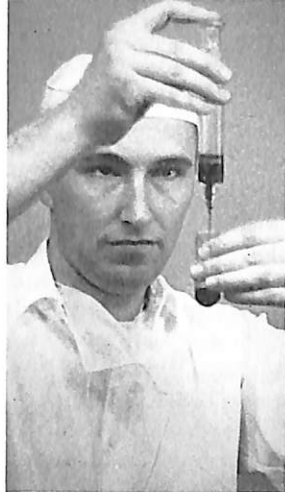
Filter	Daylight	Tungsten
Yellow-1	1½	1½
Yellow-2	2	1½
Orange-Red	4	3
Green	4	3



Filters emphasize colors. In the unfiltered shot (top) of a page from an ancient missal, printed in red and black, the red is almost invisible. By taking it again through a green filter (bottom), the red is brought up to its original tonal value.

To apply the filter factor, merely multiply the exposure that you would give without the filter by the factor. You can do this either by opening the lens, by using a slower shutter speed, or by a combination of both. Suppose, for example, the filter factor is 4 and the exposure without a filter is 1/100 second at f/8. You could increase the exposure 4 times by opening the lens 2 stops (each stop doubles the exposure of the previous stop), by setting the shutter speed at 1/25 second (1/30 or 1/20 second on older models), or by opening the lens to f/5.6 and setting the shutter to 1/50 second.

If you intend to take many shots with the same filter, it may be still easier to adjust your exposure meter dial to the filter factor. To do this, simply divide the film speed by the filter factor and set the calculator dial on your meter accordingly. You can then read the correct speeds and lens openings directly from the dial. ♦



Nick Graneri

By Ben and Sid Ross, Brooklyn, N. Y.

HIS nude form lay still and white on the operating table. A maze of wires, electrodes and catheter tubes connected to a battery of machines criss-crossed Nick's body. The tiny cramped room, at the University of Illinois Medical Center in Chicago, was absolutely quiet as Dr. Max Sadove, head anesthesiologist nodded to a young, bespectacled doctor a few feet away.

"You can begin now," said Dr. Sadove. "The subject is completely apneic. He's in complete respiratory arrest. He's no longer breathing on his own."

Swiftly the young doctor shucked off his shoes and mounted the operating table. He handed his glasses to an assistant and thus, without fanfare, Dr. Archer Gordon, Research Assistant of the University's Department of Clinical Science, began one of the most dramatic and fantastic experiments in medical history. On the table, Nick Graneri lay with his respiratory system and muscles paralyzed—a human "guinea pig" whose breathing had been stopped by the dread curare drug and by sodium pentathol. With only his hands as tools, Dr. Gordon was going to attempt to keep Nick alive by artificial respiration. Dr. Gordon and his colleagues were in that tiny room to test new "push-pull" methods of artificial respiration in order to compare them with the old, standard Schafer prone-pressure method. Nick Graneri was volunteer No. 33 in a group of human beings who had offered themselves as test subjects for the dangerous experiments.

In the same room with the battery of medical experts were two outsiders—my brother Sid (reporter) and myself as photographer. Sid's tools were a pad and pencil. I had one camera—my Leica IIIIf with two lenses; a wide angle Summaron and a 50mm. f/2 Summar, with which to record, on film, the experiments that might conceivably save the lives of thousands of people who

die each year from drowning, suffocation, and gas poisoning. Leica was helping make medical history, supplying the exclusive real-life visual documentation of the drama. The eight rolls of 35mm. film I shot that morning are the sole record of these amazing tests.

I had expected the experiments to take place in a large, well-lit operating room and was jolted to find not much more than a cubbyhole. Dr. Gordon patiently explained that they wanted a small room so that everything could be within easy reach and where the medical team could relay instructions to each other without the danger of being misunderstood.

"A man's life is at stake," said Dr. Gordon. "We can't cater to our comfort. His life comes *first*."

Because of the space factor, I knew that my Leica was the only camera for the job. Early the next morning, I set up two fresh reflector floods at each end of the room to supply bounce light off the ceiling. Loaded with Super-XX film I was going to shoot at 1/30th of a second at about f/3.5. In order to make myself inconspicuous and at the same time allow myself as much freedom of movement as possible, the case was discarded and I had the Leica suspended from a strap around my neck. Considering the position of the table on which Graneri was to lie, I saw that most of the "full-action" views would have to be taken with the wide angle lens.

Perhaps a few words on the background of the artificial respiration experiments would not be amiss. The project originally began in 1948, after a Boston scientist had suggested that a new method, the hip roll, and hip lift might be superior to the Schafer. This came to the attention of the University of Illinois, who decided to evaluate the newly-suggested methods in comparison with the existing ones. It was decided that nothing significant could be accomplished with animals, so the



Dr. Archer Gordon uses hip roll-back pressure method of artificial respiration on human guinea pig Nick Graneri.

first tests were conducted on human corpses, still warm—only a few minutes after death. A spirometer attached to the bodies measured the amount of air going in and out of the lungs. Of course such tests on corpses could not be conclusive.

Next the different methods of artificial respiration were tried on a group of "voluntary suspense" subjects and also on some "respiratory arrest" patients (i.e., polio cases). The polio patients were very apprehensive when taken out of their respirators and also suffered severe muscular pain when artificial respiration was attempted on them, so further work with them was abandoned. The tests on the "voluntary suspense" group (i.e., where individuals relaxed completely and stopped breathing in a passive sense) more or less corroborated the earlier experiments on the corpses. They found that more air was forced in to the lungs by the new methods. But there was still the nagging doubt that *conclusive* evidence, sufficient to warrant the replacing of the old methods by the new, had been attained. Besides, Dr. Gordon and his colleagues also wanted to learn which method also helped the oxygen-carrying blood to circulate quickest, and which method was easiest to teach.

"We had to try our experiments on people whose respiration was completely arrested by drugs—so they would be just as if they had 'drowned' or had been

shocked or suffocated," recalls Dr. Gordon. "This was dangerous of course. We didn't have any trouble getting volunteers. With experts in artificial respiration and anesthesiology we felt confident that the risk was minimized. Dr. Max Sadove, one of the few experts in the use of curare—he had taken it himself to test the drug first-hand—was on our team."

Twenty volunteers were obtained from various sources. Each man was given a full briefing on the nature of the tests, the hazards involved, and offered the sum of \$50.00 to become a voluntary guinea pig. Nick Graneri, 32 years old, single, and a part-time "fry-cook" in local grills and restaurants was one of the twenty.

The same afternoon that I was checking the room, Nick was given a thorough medical examination. He signed three separate releases absolving the hospital and the doctors from any responsibility should anything go amiss, and also signed a release for photographs. He went to bed early and had a good night's sleep. He got up early, had no breakfast but took a sedative. He was wheeled into the experimental room at 7:00 AM, and gave me a big smile as he waited for the doctors to begin their work.

Promptly at 8:30 AM, Nick lay down on his back on the fluoroscopy table. Under local anesthesia, Nick was "hooked up." First, electrode contact plates were attached to his arms and legs. The plates were hooked to machines that would instantly show any change in Nick's heart beat. Then began the slow, painstaking job of running thin, hollow tubes (catheters) *into* Nick's body. One tube was inserted into the vein of Nick's left arm, through the shoulder, down into the right side of his heart and from there to the pulmonary (lung) artery. Under the fluoroscope the tube looked like a big "6". Another catheter went into Nick's left thigh so that



Dr. Gordon in the back pressure phase of the lift-back pressure method. Lifting up the hips forces air into the lungs. Back pressure with flat of hands expels air.

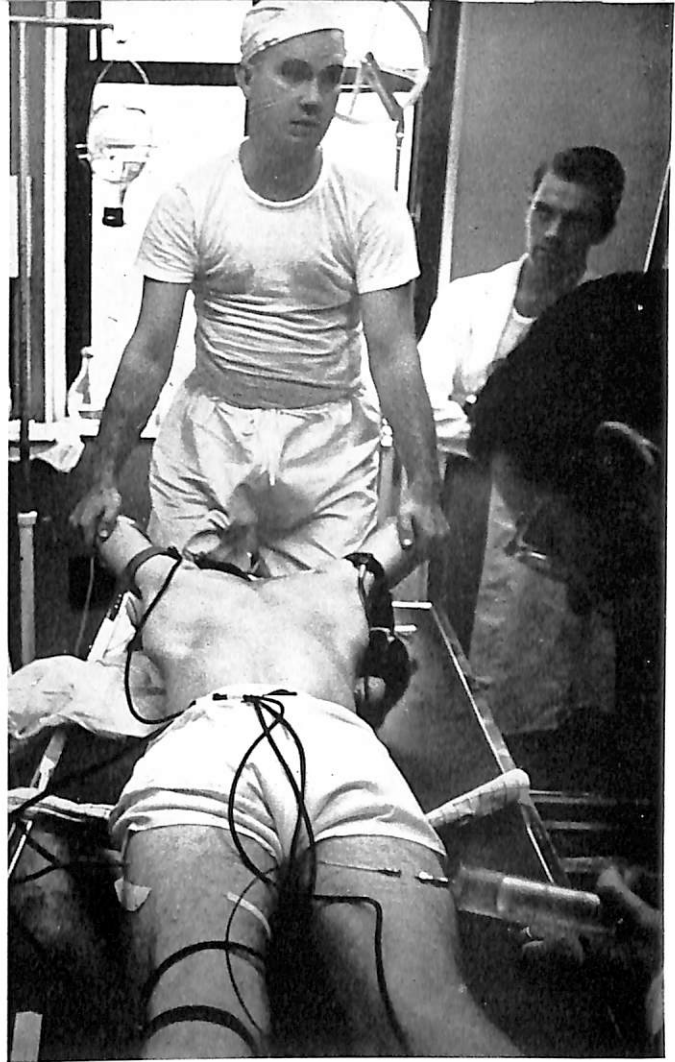
samples of artery blood could be taken. There were more than three feet of tubing in Nick's body and heart! All through this process, and for that matter all the way through the experiments, the electro cardiograph experts checked Nick's heart action.

Dr. Sadove began administering the pentathol anesthesia and curare. Then Nick stopped breathing! Carefully and gently, Nick was rolled over on his stomach. That's when Dr. Gordon got on the table and straddled Nick, facing the latter's head. He knew that if he didn't give Nick artificial respiration, Nick would die.

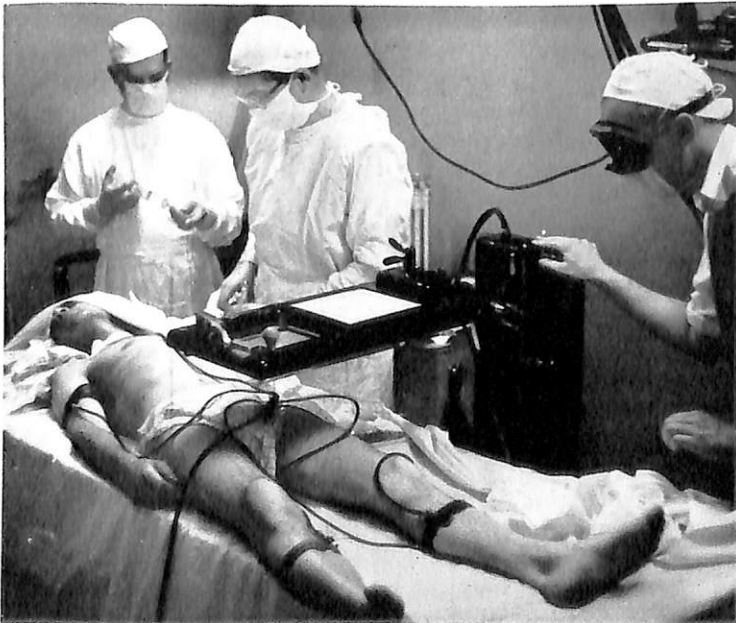
Using a rolled-up towel, Dr. Gordon began with the hip roll-back pressure method. Chewing gum as he worked, Gordon lifted up one hip with the towel (inserted under Graneri's body) and then exerted pressure on Graneri's back. Lifting up the hip forced in the air; the back pressure expelled the air from Graneri's lungs.

Without a halt, after 15 minutes of the first method, Gordon changed over to the hip lift-back pressure method. Fifteen minutes of this and then Dr. Gordon got off the table and, standing at Graneri's head, tried the arm lift-back pressure method. Lifting the arms at the elbows drives air into the lungs; exerting pressure on the back expels it. All three methods were tried at the rate of 10 cycles per minute. Every once in a while an assistant would wipe the perspiration from Dr. Gordon's brow and the back of his neck. Gordon couldn't stop. He was "breathing" for Nick Graneri.

Instruments took samples of blood every few minutes to check on how much oxygen was getting into the blood via the various methods, and how much of the oxygenated blood was being circulated through the body. Occasionally some one spoke a word but for the most part the room was silent except for the sighing of the air going in and out of Graneri's lungs, the slight



Dr. Gordon lifts Nick Graneri's arms at the elbows to test arm lift-back pressure method. Lifting arms forces in air.



Wired up inside and outside of his body, including a catheter tube in his heart and pulmonary artery Nick Graneri, medically speaking is near death. He is not breathing.

creaking of the table—and the click of the Leica shutter as I shot my pictures.

Dr. Gordon gave Nick a minute of artificial respiration via the Schafer method and then 15 minutes of the Eve "teeter-totter," or "rocking" method. Then it was all over. Dr. Gordon put his shoes back on and waited quietly while the anesthesiologist took over. In about 20 minutes there was a slight ripple around Nick's diaphragm as his respiratory system began working on its own.

The catheters, tubes and plates were removed from Nick's body and, inside of another hour, Nick Graneri was back in his hospital bed. When he woke up a few hours later he was a little weak but had no pain, and remembered nothing of what had gone on. Next morning, cheerful and chipper, he was out of the hospital with the knowledge that he had played his part in a great experiment that has already saved a number of lives. For as of today, there are already several recorded cases where the new push-pull methods—now officially adopted by the Red Cross, the armed services, police departments and utility services—have saved lives.

As I slipped my Leica into my jacket pocket and prepared to disconnect the reflector lights I could not help but feel a thrill to have been present while medical history was being made right before my eyes. ♦

FROM 35mm DIRECT TO 4x6 FT.



by David B. Eisendrath, Jr., Brooklyn, N. Y.

Some months ago, while in conference with executives of E. Leitz, the subject of huge mural-size enlargements came up. I commented that it always seemed a shame to me that most mural-size prints were usually made with intermediate negatives—particularly when original 35mm. negatives were involved. I knew that direct enlargements of extraordinary size could be, and had been, made from 35mm. originals. All too frequently, however, the intermediate step techniques were used.

A few weeks later, Leitz asked me to engineer the job of producing four large photo prints for display in New York City's Grand Central Palace. Because of the available display space, and because we wanted prints that could be used again for other displays, we decided that prints 4x6 feet would be needed here. Standard panels on which the prints would be mounted come in 4 ft. widths; a 4x6 ft. print was the exact proportion of the full Leica frame. This size panel would not be too unwieldy to be transported for future use and could even be used in hotel or small meeting rooms.

Now began our search for someone who would make such prints directly. My own darkroom, geared for production work of magazine and industrial photography, had no facilities for handling work of this size. The commercial mural makers I consulted were all willing and delighted to make prints to the size required—until I mentioned our desire to make the prints directly from 35mm. originals. All wanted to make intermediate diapositives and enlarged negatives. Not that they *couldn't* make them directly, I was told, but being in business and interested only in *production work*, they had to produce by the fastest and easiest means. Their equipment was designed to handle large

negatives and their operators were accustomed to working with the larger sized film. Making murals was their *business*—fooling around with miniature negatives was trouble!

I went to Ralph Baum who runs Modernage Photographic Services in New York City. Ralph had a great deal of experience with miniature camera negatives and his handling of 35mm. film was particularly good. "Of course, we don't make murals here," Ralph told me. "That is a rather specialized field—but there is no reason why the huge prints you want can't be made from good 35mm. originals by direct printing. If you don't find a mural maker willing to undertake the job, let me know. I have an idea." Two days later I was back at Baum's office. We decided to make the prints ourselves. A friendly mural maker agreed to let us use his large tanks and easel on a week-end when production was not the watchword.

Where to find the negatives. Here was another challenge. We checked and rechecked the many pictures in the Leica files. We were not looking for "pretty" pictures, but were searching for pictures with poster-like qualities; pictures and subjects that would be easily and quickly recognizable either close-up or from the farthest corner of huge Grand Central Palace. The pictures, it was agreed, had to be typical of the uses to which Leicas were most frequently put, and they must have mass appeal.

We had certain requirements technically, also. The negatives had to be not only "Leica-sharp"—they had to be exceptionally so. There must be every last detail present. Further, the negatives had to be free of objectionable grain, full scale, and printable with a minimum amount of dodging and printing in.

Many *good* pictures were found but lacked one or more of these strict requirements. Several possibilities were disqualified because they were not well composed on the Leica frame, and we felt that to obtain best possible quality, only pictures filling the full frame should be chosen so that extra-enlargement was not necessary. Finally, we chose eleven possible pictures. From these we made test enlargements 16x20" on glossy paper—and each was a section of a 50 times linear blow-up. From these, and from visual examination of the negatives, we evaluated the pictures and numbered them in the order in which we thought they would make good blow-ups.

Portraits, travel and scenic, sports action, and close-up are the subjects for which Leicas are probably most often employed. The pictures chosen representing these uses showed off a great deal of the Leica's ability to register fine detail, operate at high speeds, function under cold weather conditions, and also showed how some of the lenses, finders and close-up attachments could perform.

With the final selection made, we were ready to begin the print-making. Ralph and I conferred with Ray Zeppa, a printer who was used to handling big prints and who helped us with this project. Since the enlargements using full 1"x1½" negatives were to be enlarged to a size a little larger than the final 4x6 ft. print (to allow for end wrapping in mounting) we knew that the 50 times linear enlargements would require ex-

posure times much longer than normal when making conventional sized prints. This meant that the small negatives would be in the enlarger for many minutes which would not only subject the precious negatives to heat, which might endanger them, but the negatives and negative carriers might tend to curl or shut. Cold-cathode illuminated enlargers seemed to offer a solution. In addition to eliminating heat, the diffusion-type source would tend to subdue grain. A special high-intensity cold-cathode light was obtained; it was tremendously bright, and emitted a bluish light with actinic values to which enlarging papers are especially sensitive. It gave as much more effective printing speed as a large size enlarging-flood, but little heat.

To hold the negatives flat, and in place, a Leitz optical glass negative holder was used. A black paper mask, cut out to the exact size of the 24x36mm. frame, was placed around the negative to help cut down extraneous light and to help prevent Newton rings. We had been worried about keeping the small negatives clean and dust free, and here Baum showed us a neat trick. After cleaning the negatives thoroughly with film cleaner on a soft chamois, a drop of an anti-static solution (photo sweep) was rubbed on both sides of the negatives and glass negative carrier. Amazingly, this kept our negatives dust-free and kept spotting on the finished prints to a minimum.

Into the darkroom and to printing! In mural making, horizontal projection is usually used, especially since the distance from enlarger to the projected image is often twenty feet or more. In such cases, as here, the enlarger is mounted permanently, horizontally, and the easel is moved back and forth. And what an easel! Sturdily mounted on four large, heavy wheels, and moving with precision along a double track built into the floor, it stands ten feet high, and with removable side-wings added, twelve feet wide. The surface is half-inch thick Homosote board, painted white to facilitate focusing.

Before we started with the first negative, we made a rough focus with a high-contrast focusing screen to give us an idea as to how far the easel had to be from the lens, and how the lens must be focused. Here, Ray took a white-faced ruler and measured 50" across the easel, marking it with two small patches of black tape; this was to be our picture width. After carefully adjusting lens and easel, we substituted the first cleaned, anti-static treated negative for the focusing screen, turned out all darkroom lights (including safe lights,) and began to check for critical focus. The easel was rolled backward and forward as we carefully watched the image with magnifiers. Finally, we were all agreed that the image was critically sharp, and at this point, with safe lights on, small wooden wedges were shoved into the enlarger to keep the negative carrier and negative from slipping or "breathing" during the long exposures. The wheels of the easel were also locked to prevent rolling or movement. The enlarger lens was stopped down to f/8 and the enlarger light turned off. Under the safelights, a long strip of paper about 10" wide was pinned diagonally across the easel for a test print.

Test exposures of ten minutes and twelve minutes



were agreed upon and, with the enlarger turned on, we sat patiently in the darkroom to avoid vibration of floor or equipment. After processing the test strip, we took it into the adjoining room, which was brilliantly lighted, and examined it, comparing it to small prints we had made previously. We saw that the twelve minute exposure was right on the button and that we had focused sharply—as on close examination we could see grain structure and even more detail than we had noticed in the smaller prints. Back to the darkroom where Ray gave us a beautiful demonstration of the handling of large pieces of paper.

A roll of enlarging paper 51" wide was laid on a side table under a safelight. With his white-face ruler lying across the table, Ray quickly measured a piece of paper about 80" long; this was to allow a few inches for handling at each end beyond our 75" actual print length. The measured-off piece was allowed to roll beside the large roll, and a sharp mat knife used to separate them. The cut-off piece was taken to the easel and Ray's clever handling made it an easy job to mount it straight. Previously, he had left a piece of tape on the easel as a marker for picture width. These also served to show the top of the picture. The roll of paper was held a few inches higher than the marker and a push-pin was used to hold one corner of the roll to the edge of the easel at this point. The paper was allowed to unroll about a foot and pivoted on the single push-pin which anchored its upper corner until the edge of the paper was parallel to the edge of the easel. Holding it firmly in place, several pins were now put into the upper edge and other corner and the roll was allowed



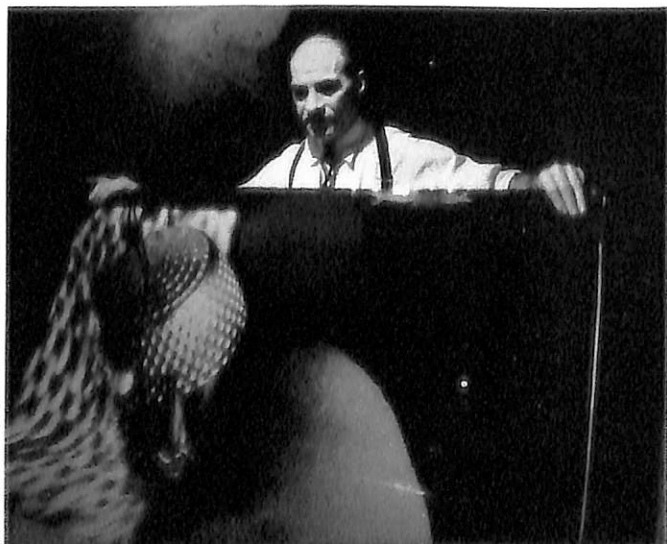
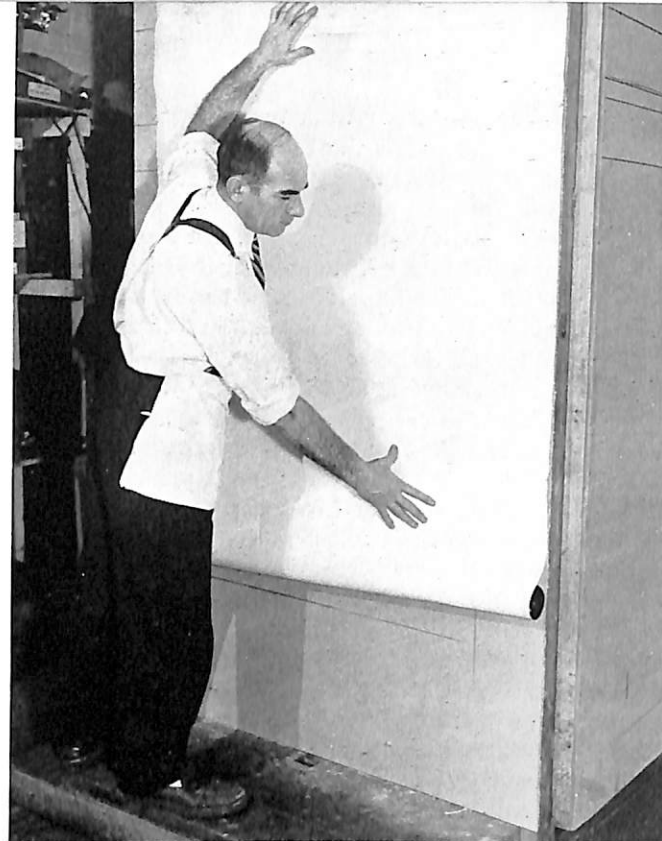
to drop until it hung its full length. Push-pins were put in at intervals of about one foot along each edge and across the bottom.

The enlarger was now turned on, the timer set, and we waited patiently for twelve minutes to pass. At the end of this time, we burned in the corners slightly for a few minutes more. With the bottom and side pins removed, the exposed paper was now rolled up, pins removed, and taken from the easel to the developing tank. Here is where quick and practiced handling is essential. The huge tank, 60"x40", had been filled with about 30 gallons of a solution of Dektol and water, 1-2, and the temperature had been kept at 68°F. Plunging the entire roll of paper rapidly into and under the developer, Ray began to deftly unroll the print, pulling it through the developer until it was completely unrolled and lifted so that it was lying open in the solution, emulsion side up, each end rolled under so that the underneath part was also fully opened and emulsion side down. The huge print was kept slowly moving through the developer something like a continuous belt. Bubbles were kept off it, and the whole tank slowly rocked. After two and one-half minutes, when we had agreed that it was fully developed, the print was gently folded cross ways without creasing it at any point, and folded again into a flat long packet about 18" wide and the entire 51" length. This long bundle was grasped firmly between thumb and fingers, with arms wide apart, and the entire print lifted, in one quick movement, into the nearby short-stop solution. It is particularly important when lifting these huge bundles of wet paper to keep the hands pulling slightly apart so that there will be no sag in the middle and, consequently, no fold or crease mark.

After a quick unfolding and refolding in the acetic stop bath, the same procedure put the print into the hypo. Here the print was opened, flopped over and the same technique as used in the developer spread the print open and floated it through the fixer. Occasionally, the print was lifted bodily and turned over, too. The entire handling of the large wet print was *firm* and *deliberate* but at no time was a fold or crease allowed to become any more than a gently rolled edge.

When fixing was completed, the print was moved into a water rinse for a few minutes to remove the surface hypo and then left to wash in a large tank of running water. Hyponeutralizing solutions (such as BFI No. 30) are particularly useful in mural and exhibition print work because a short bath in this solution enables you to cut down on final washing time and large prints are difficult to wash thoroughly.

When all of our prints had been made and washed, they were carefully rolled up and allowed to stand on end to drain for about five minutes. The prints were then taken one at a time and unrolled into a large drum drier, the print surface was wiped with a clean, dry towel as they were fed into the drier; this helped to maintain even drying and to prevent spots. With prints as large as this, we found a few small blisters caused by washing. Ray took a pin and punctured them from the rear to let the air out; they left no mark. The dried prints, after careful inspection, were rolled around a

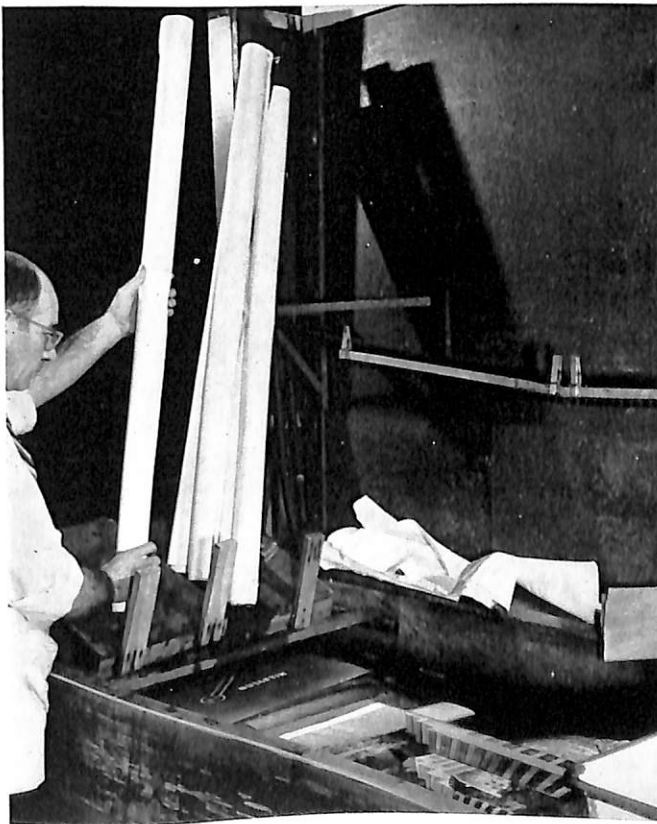




large cardboard tube and sent to be mounted by the display people who installed the exhibit.

The prints were wet-mounted and edge-wrapped on half-inch Homosote panels and braced in the rear to prevent warping. Wet-mounting is not difficult and perhaps best for this kind of display. The technique is simply this: Panels are cut to exact size, laid flat on a large table, and the surface completely covered with a special, paste-like adhesive. As soon as this is done, the prints are resoaked in water for a few minutes to soften them thoroughly, rolled up, and unrolled onto the pasted panel. The print is slid on until it is in its proper place and then carefully squeegeed wrinkle-free on to the panel. Prints this size usually stretch about an inch and one-half when wet, and shrink tightly to the panel.

The edges of the print are folded over the edge of the panel, the panel quickly turned over, and the edges stretched down along the back. The corners at the back



are slit so that two flaps can be pulled down tightly. Last of all, the surplus border is trimmed off with a knife, or along the sharp edge of a straight piece of plate glass. The face of the panel is then wiped off, excess paste is removed, and the entire piece is dried.

Some interesting miscellaneous statistics on the project are: exposures ran from 12 to 20 minutes with 2 to 7 minutes extra time for burning in corners or light areas. The lens was stopped to f/8. Gevaert paper, semi-matte was used in 51" wide rolls. Three of the prints required Vigorous paper (#3) and one of them Normal contrast (#2). The entire printing was done in one afternoon. The prints are 50x linear, or 2500x in area. It would take 2500 contact prints to cover one of the huge blow-ups. These are by no means the largest prints made from 35mm., but rarely have prints as large been made directly from 35mm. negatives. And it does go to show that those postage-stamp size negatives can really produce quality posters. Once again Leitz leads the way in proving that it can be done. ♦



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